

Smile and Gender in Students' Yearbook: A Cultural Replication

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Abstract

US social psychologists have found that there is a gender difference for use of a smiling facial expression. A replication was found in France where numeric photographs of student-yearbooks were examined to observe whether the student smiled or not. Results shown that women were more likely to smile and to do so more fully. These results were congruent with previous research conduct in United States and the universal gender differences in smiling is discussed.

Keywords: Nonverbal behavior, facial expression, smiling, gender difference, cultural difference

1. Introduction

A host of previous research gave empirical evidence that women smile more frequently than men across a variety of situations. DeSantis and Sierra (2000) have examined yearbooks of high schools and class pictures of students. The observer recorded whether the student on the photograph appeared to be smiling and, if so, whether the smile was "partial" (i. e. lips not parted) or "complete" (i. e. teeth visible through parted lips). They found that the percentage of smiling male students is consistently less than the percentage of smiling females from the same academic year. They also found that female students smiled more completely than male students. Then women seem to smile more often and openly than men when photographed. Such results are in accordance with previous research (Bugental, Love & Gianetto, 1971; Chaiken, 1979; Dodd, Russell, Jenkins, 1999; Frances, 1979; Halberstadt & Saitta, 1987; Henley, 1977; LaFrance & Carmen, 1980; Mackey, 1976). Furthermore, these studies were all conducted in US. However, with nonverbal behaviors, we know that cultural factors have a considerable importance. Hall (1966) distinguishes between contact's and non-contact's cultures, by integrating into "contacts" smile, touch but also the glance, the body's position and direction... Contact's cultures would be characterized by expressive nonverbal behavior such as smile, tactile contact whereas non-contact's cultures would be distinguished by more distant and less expressiveness. France and Latin America and Arab countries would be typical of contact's culture whereas North America and Germany would belong to non-contact's cultures (Andersen, 1988; Remland, Jones & Brinkman, 1991; 1995). The purpose of our work was to test the gender difference of smiling behavior in France, a contact's culture. We hypothesized again that women will smile more often and more completely than male students but that in France, students smile more often and more completely than in the same study conducted by DeSantis and Sierra (2000).

2. Method

Photographs of female and male faces were examined by two observers. The photographs came from numerical yearbooks of high schools of students in business at the University of Bretagne-Sud on the West Atlantic coast in Brittany in France. Twelve years of years-books were examined for a total of 1183 male and female students and between the periods of 1991 to 2002. Two observers (one male and one female who were students in the same department) examined each separate picture. Before examining the photographs, the instructor gave a sheet containing the instruction to code the smiling expression of the face. Both observers received a sheet with 3 photographs of the same male's confederate with different smiling expression. Each photography was accompanied by an annotation that described the facial expression: 1]“*This person expresses no smile*”, 2] “*This person expresses a partial smile because his/her lips are not parted*”, 3]“*This person expresses a complete smile because his/her teeth are visible through parted lips*”. The observers were instructed by the experimenter to read and to observe carefully the photographs and the comments because they will had to rate the facial expression of smile of the men and women who were students in their department some years ago. The photographs were presented one to one on a computer screen. The observers were instructed to code each facial expression by pressing one of the three numerical keys (1, 2 or 3) on the keyboard that corresponded to the 3 levels of the facial expression of the target. The two observers were separated to perform their task. A five minutes pause break was granted when 200 photographs were coded. The observers were blind about the hypothesis but a reliability index was calculated with the scores of each photograph (1, 2 or 3). The agreement was highly significant between the two observers: $r(1182) = .92, p < .001$.

3. Results

The result of the rate of the pattern of smiling by gender found in this study is presented in table 1.

Table 1: Gender differences in smiling pattern (in brackets pattern of smiling in DeSantis and Sierra's (2000) study for the period between 1990-2000)

Gender	Facial expression		
	No smile	Partial Smile	Complete smile
Male (N = 524)	18.13 % (19.64 %)	24.05 % (22.21 %)	57.82 % (58.15 %)
Female (N = 659)	5.61 % (7.14 %)	12.75 % (14.35 %)	81.64 % (78.51 %)

A chi-square test for contingency table was performed with the data and shown a significant dependence between gender and facial expression ($\chi^2(2, N = 1183) = 85.25, p < .001, r = .26$). When considering only two facial expressions (no smile/smile where smile = Partial smile and complete smile collapsed) a significant difference was found ($\chi^2(1, N = 1183) = 46.11, p < .001, r = .20$). When considering the two types of smile across gender (partial smile vs complete smile) a significant difference was also found ($\chi^2(1, N = 1051) = , p < .001, r = .19$).

3. Discussion

In this study we found that from 1991-2002, female-students on year-books smiled more often and more openly than male-students. These data confirmed our first hypothesis and are congruent with previous studies (Bugental, Love & Gianetto, 1971; Chaiken, 1979; Dodd, Russell, Jenkins, 1999; DeSantis & Sierra, 2000; Frances, 1979; Halberstadt & Saitta, 1987; Henley, 1977; LaFrance & Carmen, 1980; Mackey, 1976). Furthermore no differences between our data and the data found by DeSantis were found. The frequencies of smile are nearly the same. This effect is not explain by the

period considered for the comparison because we have considered the year-books from 1991 to 2002 whereas DeSantis and Sierra (2000) have considered the period from 1990 to 2000. These scientists also found in their study that when considering the yearbooks of students at the same university for the years of 1903 to 2000, they found that as the century progressed more of each sex smiled and the distribution still remained the same since the 1980s. Furthermore, DeSantis and Sierra (2000) found that for every decade more females than males smiled and smiled more openly.

So our second hypothesis was not found because no difference was noticed between the smiling pattern of students in France and in United States for the same period considered. We previously argued that because previous studies have found that French compared to United States are considered as a culture where expressive contacts are more favorably expressed by individuals, we could wait for a difference in the facial expression between our students sample and the data found by DeSantis and Sierra (2000) who also studied students' yearbooks. Smile is a nonverbal behavior and with such behaviors it was previously found that differences existed between social interaction of individuals that come from France or United States. This cultural factor was confirmed by Jourard (1966)'s study who found some difference in tactile contact. This author watched pairs of people engaged in a conversation in coffee shop male and female dyad in San Juan (Puerto Rico), London (Great Britain), Paris (France) and Gainesville (Florida-USA), counting the number of times that one person touched another at one table during a one-hour sitting. The results were, for San Juan, 180, For Paris, 110; for London 0 and for Gainesville, 2. Of course smiling is not touching and the study of Jourard was conducted five decades earlier but the difference was very high. Then, perhaps, as it was found by DeSantis and Sierra (2000) when they examined facial expression of students' yearbook all along a century, the level of smiling expression in photograph is higher now than in the past and it's perhaps the expression of changes in nonverbal communication. So these changes in facial expression in United States all along the time, would explain why there is no difference now in smiling expression between American's and French's students.

Furthermore, with our data we confirmed that women were more likely than men to smile expensively when photographed whereas men were more likely not to smile. Why such difference occurred? Facial expression is clearly a form of self-presentation and it was found that the difference according to gender appeared during the ages of 9 to 12 years (Dood, Russell & Jenkins, 1999). For Dood, Harcar, Foerch and Anderson (1989) with a developing interest in sex and sexuality during preadolescence, boys and girls may turn to the media for definitions of the "ideal" woman or man with stereotypical portrayals of serious, unsmiling men and lighthearted smiling women. Afterwards, this nonconscious "ideal" could led men and women to express, partially, different facial expression when photographed and that why there were some difference according to smiling expressions between men and women in the United States' culture but also, as we found, in French's culture. This difference of smiling expression according to gender is perhaps universal?

References

- [1] Andersen, P. (1988). Explaining intercultural differences in nonverbal communication. In L. Samovar & E. Porter (Eds.), *Intercultural communication : a reader* (pp. 272-281), Belmont, California : Wadsworth.
- [2] Bugental, D. E., Love, L. R., & Gianetto, R. M. (1971). Perfidious feminine faces. *Journal of Personality and Social Psychology*, 17, 314-318.
- [3] Chaiken, S. (1979). Communicator physical attractiveness and persuasion. *Journal of Personality and Social Psychology*, 37, 1387-1397.
- [4] DeSantis, M., & Sierra, N. (2000). Women smiled more often and openly than men when photographed for a pleasant, public occasion in 20th Century United States Society. *Psychology: A Journal of Human Behavior*, 37, 21-31.
- [5] Dood, D. K., Harcar, V., Foerch, B. J., & Anderson, H. T. (1989). Face-ism and facial expressions of women in magazine photos. *Psychological record*, 39, 325-331.
- [6] Dodd, D. K., Russell, B. L., & Jenkins, C. (1999). Smiling in school yearbook photos: Gender differences from kindergarten to adulthood. *The Psychological Record*, 49, 543-554.
- [7] Frances, S. J. (1979). Sex differences in nonverbal behavior. *Sex Roles*, 5, 519-535.
- [8] Halberstadt, A. G., & Saitta, M. B. (1987). Gender, nonverbal behaviour, and perceived dominance: A test of the theory. *Journal of Personality and Social Psychology*, 53, 257-272.
- [9] Hall, E. (1966). *The hidden dimension*. New-York : Anchor Books/Doubleday.
- [10] Henley, N. M. (1977). *Body politics: Power, sex, and nonverbal communication*. Englewood Cliffs, NJ: Prentice Hall.
- [11] Jourard, S. (1966). An exploratory study of body accessibility. *British Journal of Social and Clinical Psychology*, 5, 221-231.
- [12] LaFrance, M., & Carmen, B. (1980). The nonverbal display of psychological androgyny. *Journal of Personality and Social Psychology*, 38, 36-49.
- [13] Mackey, W. C. (1976). Parameters of the smile as a social signal. *Journal of Genetic Psychology*, 129, 125-130.
- [14] Remland, M., Jones T., & Brinkman H., (1991), Proxemic and haptic behavior in three european countries. *Journal of Nonverbal Behavior*, 15, 215-232.
- [15] Remland M., Jones T., & Brinkman H., (1995), Interpersonal distance, body orientation, and touch : effects of culture, gender and age. *The Journal of Social Psychology*, 135, 281-297.